This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claims 1-26(canceled).

27(new). An isolated polynucleotide which codes for a protein with trans-sialidase activity and can be isolated from *Trypanosoma congolense* and which comprises a nucleic acid sequence of SEQ ID NO: 1 or 3; the polynucleotides complementary to the same; and the nucleotide sequences derived from these polynucleotides by degeneration of the genetic code.

28(new). The isolated polynucleotide of claim 27, which codes for a protein with trans-sialidase activity and which catalyzes the transfer of sialic acid from a donor onto an acceptor molecule.

29(new). An isolated oligonucleotide, which hybridizes with a polynucleotide of claim 27 or 28 under stringent conditions.

30(new). An isolated polynucleotide, which hybridizes with an oligonucleotide of claim 29 under stringent conditions, and codes for a gene product of microorganisms of the *Trypanosoma* genus.

31(new). An isolated polypeptide, which is coded by a polynucleotide, which comprises a nucleic acid sequence of claim 27.

32(new). An isolated trans-sialidase obtainable from *Trypanosoma congolense,*characterized by one of the following amino acid part sequences: TDTVKYSTDGGRTWKREVIIPNGR (pos. 1 to 25 of SEQ ID NO: 2)

FRIPSLVEIDGVLIATFDTRYLRASDSSLI (pos. 1 to 30 of SEQ ID NO: 4).

33(new). The isolated trans-sialidase 1 (TS1) of claim 32, characterized by at least one of the following characteristics:

Nucleotide sequence	SEQ ID NO: 1
Amino acid sequence	SEQ ID NO: 2
Temperature optimum	30-40°C
pH optimum	pH 6.5-8.5
Isoelectric point	pH 4-5
Molecular weight, native	400-600 kDa
Molecular weight in the reducing SDS page	90 kDa

34(new). The isolated trans-sialidase 2 (TS2) of claim 32, characterized by at least one of the following characteristics:

Nucleotide sequence	SEQ ID NO: 3
Amino acid sequence	SEQ ID NO: 4
Temperature optimum	30-40°C
pH optimum	pH 6.5-8.5
Isoelectric point	pH 5-6
Molecular weight, native	120-180 kDa
Molecular weight in the reducing SDS page	90 kDa

35(new). The isolated polynucleotides and trans-sialidases of claim 27, isolated from the *Trypanosoma congolense* organism.

36(new). The isolated polynucleotides, polypeptides, oligonucleotides and trans-sialidases of claim 27, produced using chemical, biochemical, enzymatic, gene technological and transgenic methods.

37(new). A trans-sialidase of either claims 33 or 34, the amino acid sequence or part sequence of which has a sequence identity of at least 50 % or at least 60 %, in particular at least 65 % or at least 70 %, such as eg. 75 %, 80%, 85 %, 90 %, 95 %, 98 % or 99% to the corresponding amino acid sequence or part sequence of SEQ ID NO: 2 or 4, calculated according to the algorithm of Pearson and Lipman, Proc. Natl. Acad, Sci. (USA) 85(8), 1988, 2444-2448; or which contains one or more deletions, additions, substitutions or inversions of an individual or of several amino acid residues or shows a changed glycosylation pattern; whereby the capability of catalysis of the transfer of sialic acids from a donor to an acceptor is maintained.

38(new). A nucleotide sequence, encoding a trans-sialidase of claim 32.

39(new). An expression cassette, comprising, in operative connection with at least one regulative nucleic acid sequence, a nucleic acid sequence of claim 38.

40(new). A recombinant vector, comprising at least one expression cassette of claim 39.

41(new). Procaryotic or eucaryotic host, transformed with at least one vector of claim 40.

42(new). A method for the enzymatic sialization of an acceptor molecule, characterized in that the acceptor molecule is incubated with a donor containing sialic acid residues in the presence of an enzyme of claim 31, and the sialylated acceptor is isolated.

43(new). The method of claim 42, characterized by at least one more of the following properties:

a) the donor is selected from the group consisting of sialic acids bonded to oligosaccharides, polysaccharides, polysialic acids, glycoproteins and glycolipids.

b) the acceptor is selected from the group consisting of polymers containing ß-galactose, such as ß-galactooligosaccharides, lactitol, lactobionic acid, methyl-ß-lactoside, acetyllactosamines, galactopyranosides, trans-galactooligosaccharides, polygalactose and other glycoconjugates with terminally bonded ß(1-3) or ß(1-4) galactose or galactose.

44(new). An effector of the trans-sialidase activity of a trans-sialidase of claim 31,

a) polypeptide ligands which interact with a trans-sialidase selected from the group consisting of claim 31;

b) low molecular effectors which modulate the biological activity of a trans-sialidase of claim 32; and

c) antisense nucleic acid sequences of a nucleic acid sequence of claim 27.

45(new). Amethod for the isolation of an enzyme with trans-sialidase activity as defined in claim 32, whereby

a) Trypanosoma congolense is cultivated in a medium,

b) and the desired product is isolated from the culture supernatant by means of ion exchange chromatography with the help of a salt gradient.

46(new). The method of claim 45, additionally comprising isoelectric focussing, gel filtration, affinity chromatography and/or protein precipitation.

47(new). A diagnostic or therapeutical or gene-therapeutical composition, containing in a diagnostically or therapeutically or gene-therapeutically compatible carrier at least one effector of claim 44.

48(new). A foodstuff or food additive containing an effective amount of the isolate of claim 32.